AERATORS

AERATION ROTOR Type: MR10

Unit designed for transferring oxygen in the biological stage of the wastewater treatment plants. Introduces oxygen by stirring the mixed liquor with blades.

The number of rotors and their length will be determined by oxygen demand and tank dimensions.

The oxygenation capacity and the power consumed are related to the submergibility of the rotor. Water immersion can be controlled with an automatic operation spillway, controlled by a signal coming from the dissolved oxygen measuring probes. This system results in large electrical power savings.

For plants with variable volumetric loads, these units can be geared with two-speed motors.

Description and Features:

- **Power unit.** Consisting of a special geared motor with epicyclical gears coupled to a vertical layout three-phase motor. This power unit has heat resistances to facilitate the start-up of the motor.

- **Elastic coupling.** The mechanism that joins and transmits the torque of the power unit to the rotor. Built in special rubber materials with steel core, its elasticity serves to absorb small assembly alignment deviations, as well as possible effects caused by axle buckling.

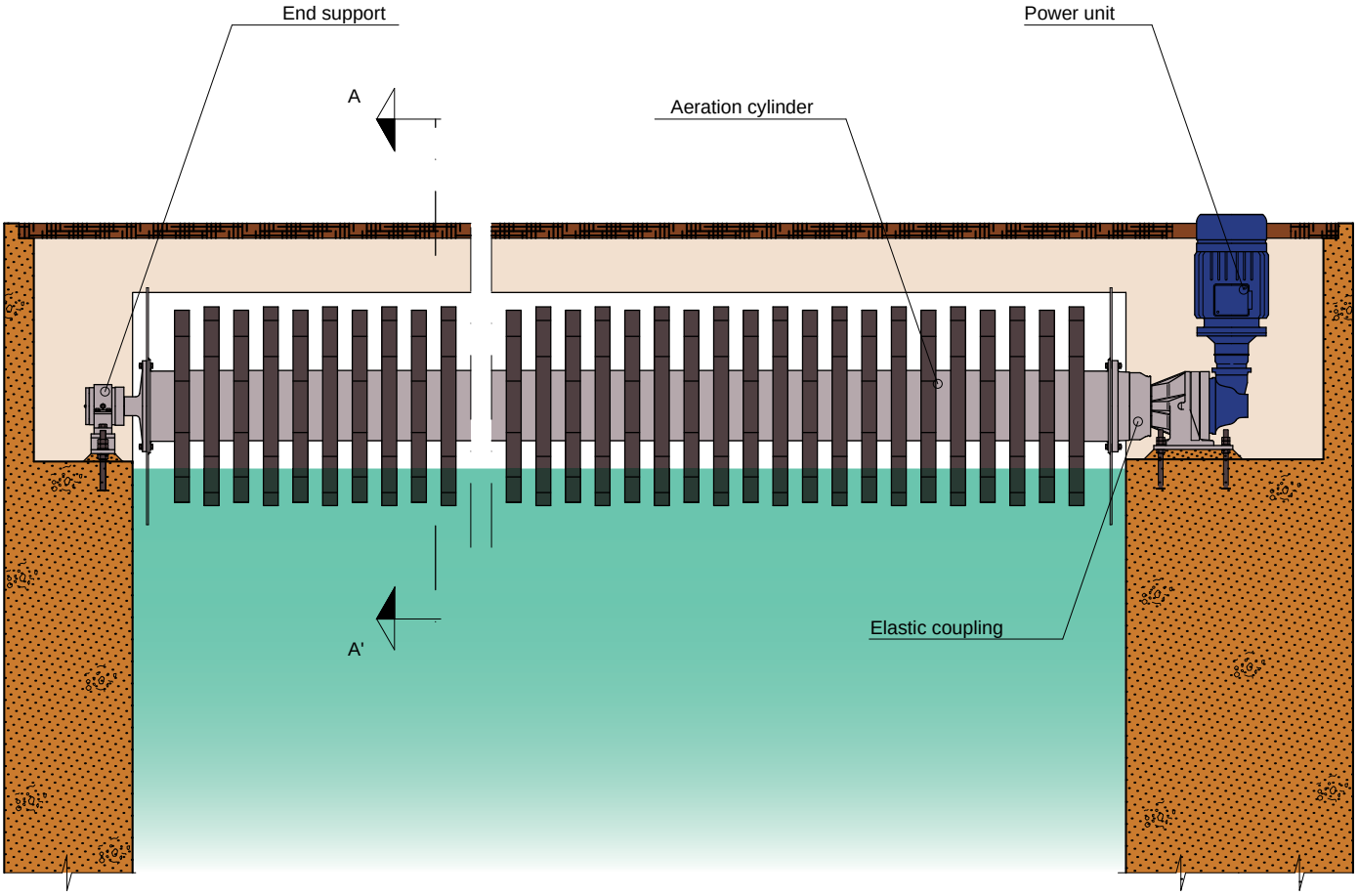
- **Aeration cylinder.** Connected to the power unit, via an elastic coupling, it supports the lateral blade and disk modules for protection against spills on the power unit and opposite support.

- **Blade modules.** Manufactured with polyamide reinforced with fibreglass, these blades form a 12-point star and are anchored to the anchor with stainless steel with straps to facilitate assembly and disassembly. When rotating, they transfer the oxygen to the inside of the liquid mass.

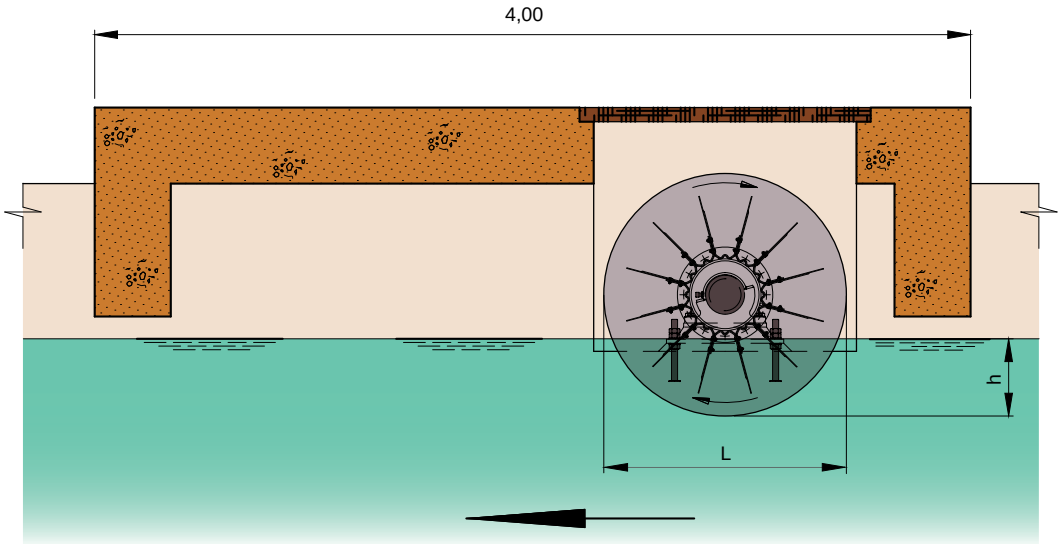
- **End support**. Consisting on an axle with a flange, two bearings, and everything installed inside a sealed box with labyrinth closure. The support allows for accurate support of the equipment on the opposite side of the reducer. A greasing system will serve for periodic lubrication of the device.

- **Optional element:**

  - **Deflector screen** (Baffle). Its installation provides a higher oxygen supply performance, as it pushes the air bubbles towards the bottom of the enclosure, thus increasing the oxygenation area. Installed slightly submerged before the rotor, in the same direction as water circulation, with a 30º angle with the vertical side and its ends supported by guides. On the middle part, a tightening screw provides a better anchoring when the rotor is working.


End support
Power unit
A
Aeration cylinder
A'
Elastic coupling

SECTION " A-A' "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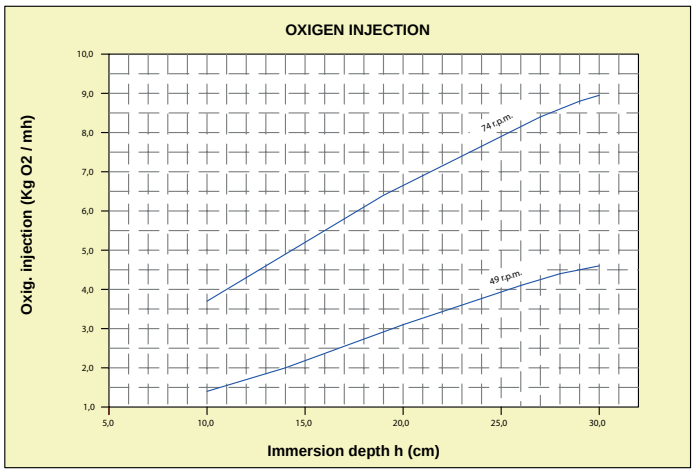
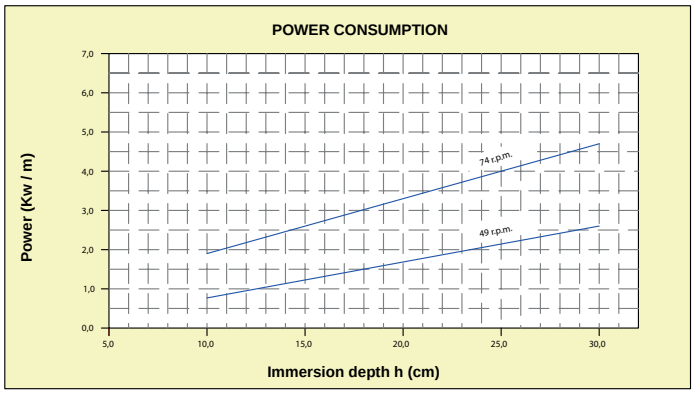
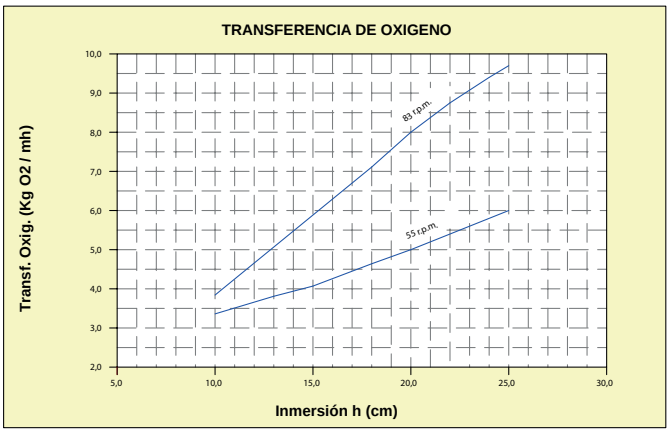
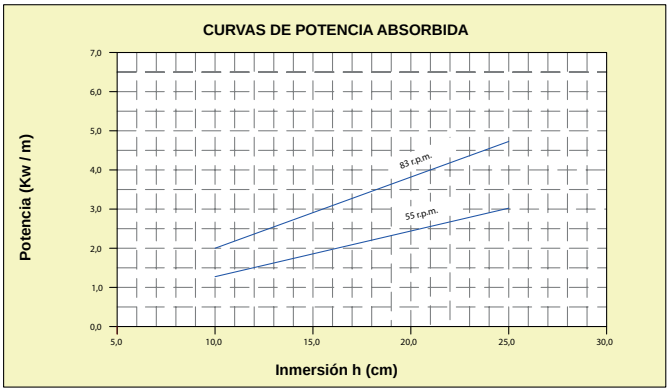


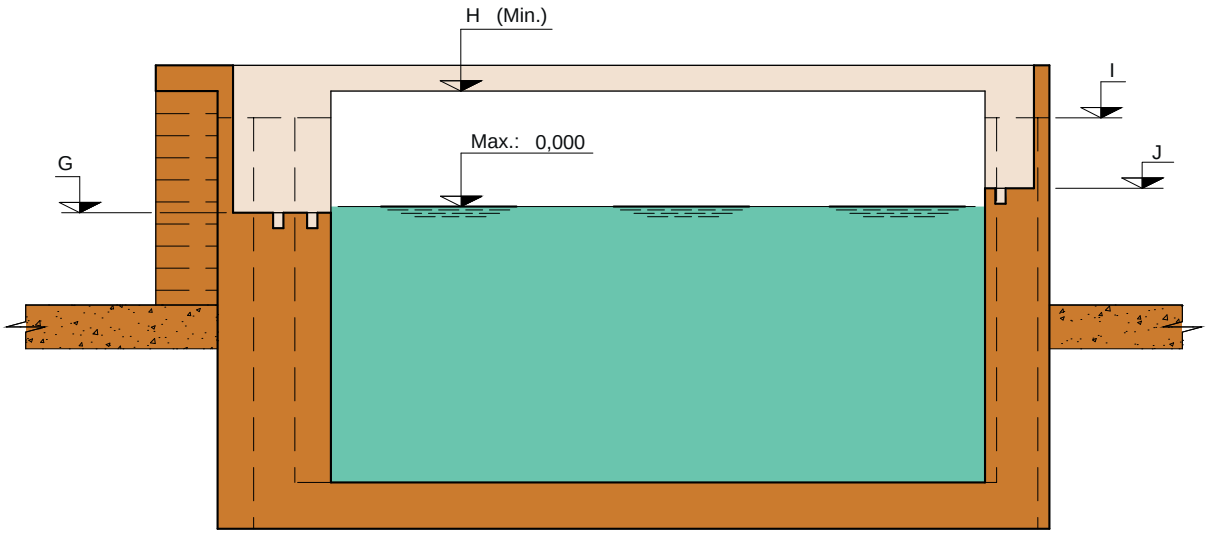


Type	L (m)	Rotor Speed(r.p.m.)	Motor power (H.P.)	Power (Kw)	Motor Speed(r.p.m.)	Maximum immersion (cm.)
MR10-300	3,00	74 (74/49)	20 (20/13,4)	15 (15/10)	1500 (1500/1000)	29
MR10-450	4,50	74 (74/49)	30 (30/19,7)	22 (22/14,7)	1500 (1500/1000)	29

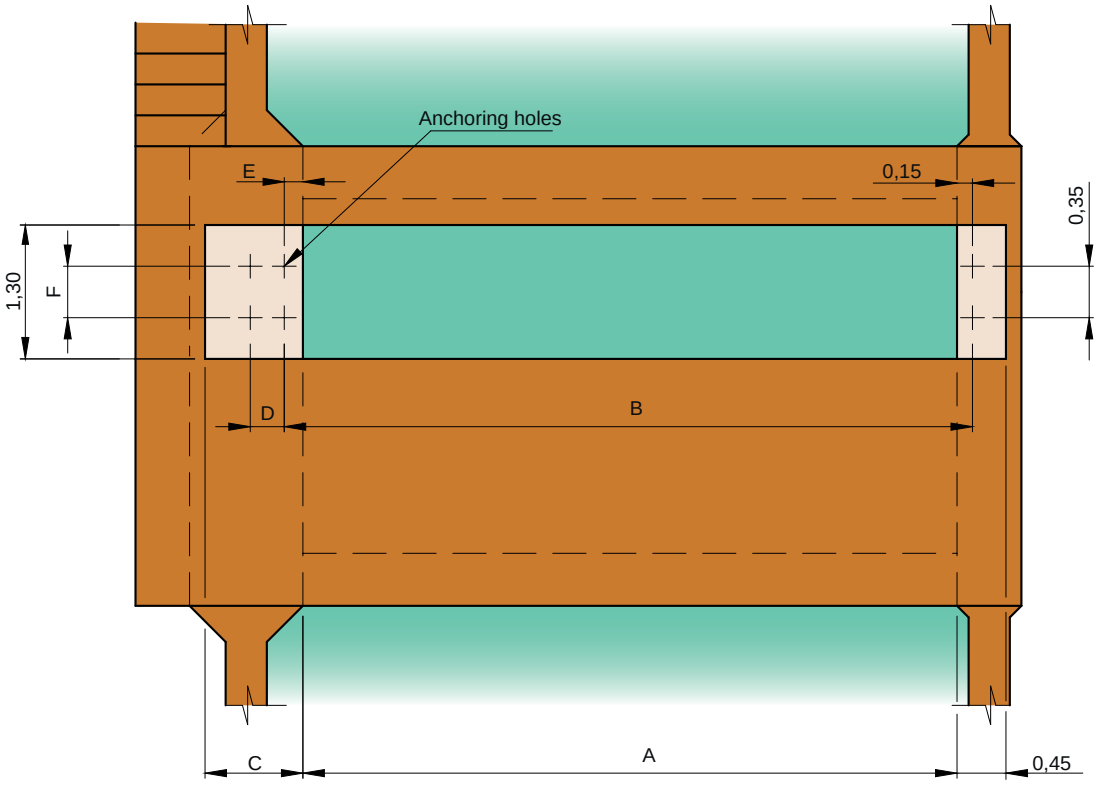




Tipo	L (m)	Velocidad Rotor (r.p.m.)	Potencia (CV)	Potencia (Kw)	Velocidad Motor (r.p.m.)	Inmersión Máx. (cm.)
MR10-600	6,00	83 (83/55)	40 (43/28,2)	30 (32/21)	1500 (1500/1000)	24
MR10-750	7,50	83 (83/55)	50 (48,3/32,2)	37 (36/24)	1500 (1500/1000)	24
MR10-900	9,00	83 (83/55)	60 (67/42,9)	45 (50/32)	1500 (1500/1000)	24



SECTION " A-A' "



TYPE	A	B	C	D	E	F	G	H (Min.)	I	J
MR10-300	3,35	3,681	0,95	0,33	0,181	0,50	-0,040	0,82	0,500	0,02
MR10-450	4,85	5,181	1,10	0,33	0,181	0,50	-0,060	0,82	0,500	0,02
MR10-600	6,35	6,681	1,10	0,33	0,181	0,50	-0,010	0,87	0,500	0,07
MR10-750	7,85	8,181	1,10	0,33	0,181	0,60	-0,035	0,87	0,500	0,07
MR10-900	9,35	9,771	1,20	0,35	0,271	0,70	-0,090	0,87	0,500	0,07

Dimensions in meters